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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,426	11/29/2001	Tyler Thorp	03226/136001; P6821	6431
32615	7590	04/20/2004	EXAMINER	
OSHA & MAY L.L.P./SUN 1221 MCKINNEY, SUITE 2800 HOUSTON, TX 77010			THOMPSON, ANNETTE M	
			ART UNIT	PAPER NUMBER
			2825	
DATE MAILED: 04/20/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/997,426	<b>Applicant(s)</b> THORP ET AL.	
	<b>Examiner</b> A. M. Thompson	<b>Art Unit</b> 2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10, 13 and 14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 7-9, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 2, 6 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Applicants' amendment to 09/997,426 has been examined. Claims 2, 9, and 10 are amended. Claim 12 is cancelled. Claims 1-10, 13 and 14 are pending.

1. Applicants' amendments and remarks have been carefully considered and are deemed persuasive. However, a new ground of rejection has been applied herein.

#### ***Claim Rejections - 35 USC § 103***

##### **Rejection of claims 1, 3-5, 7-9, 13, 14**

2. **Claims 1, 3-5, 7-9, 13, 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Haritsa et al. (Haritsa) in view of Applicants' admitted prior art. Haritsa discloses a method and apparatus for determining clock insertion delays for a microprocessor design having a grid-based clock distribution. However, Haritsa does not disclose the internal details of the clock grid. Applicants' prior art provides details of the internal connections of a conventional clock grid structure. It would have been obvious to one of ordinary skill in the art to combine the teaching of any prior art which discloses the details of a conventional grid structure, as Applicants' prior art does in this case, to illustrate, where necessary, the internal connections of a clock grid structure.

3. Pursuant to claims 1 and 5 which recite [a]n integrated circuit (Haritsa discloses a microprocessor design, Abstract and [0001, 0002, 0028]) comprising a clock driver disposed on the integrated circuit [Haritsa, 0009]; a clock grid disposed on the integrated circuit (Haritsa, Fig. 3, L2 grid), wherein the clock driver is disposed outside a region of the clock grid (Haritsa, Fig. 4, illustrates the clock drivers outside of the clock grid); and at least one interconnect arranged to propagate a signal from an output of the

clock driver past an exterior region of the clock grid to a connection point residing at a non-exterior region of the clock grid (Haritsa discloses clocked elements within the L2 grid, 0010; Applicants' specification, 0006, Fig. 3a, 3b).

4. Pursuant to claim 3 and 7, wherein the at least one interconnect is arranged in a wire tree configuration (Haritsa, Fig. 4, illustrates a wire tree configuration).

5. Pursuant to claim 4 and 8, wherein the wire tree configuration is balanced (Haritsa, Fig. 4, L5-L3 illustrates a balanced wire tree configuration).

6. Pursuant to claim 9 which recites [a] method for reducing clock skew comprising sending a clock signal from a clock driver to a first component through a connection point on a clock grid (Haritsa, Fig. 4 and Applicants' Figure 2), wherein the clock driver resides outside a region of the clock grid; and sending the clock signal from the clock driver to a second component through the connection point (Applicants' Figure 2), wherein the clock signal is propagated from an output of the clock driver past an exterior region of the clock grid to the connection point (Applicants' Figure 2), and wherein the connection point is at a non-exterior region of the clock grid.

7. Pursuant to claim 13, which recites a transmission structure for driving a signal onto a clock grid, comprising an interconnect connecting a clock driver to the clock grid (Applicants' specification, 0006, Fig. 3a, 3b), wherein the clock driver resides outside of a region of the clock grid (Haritsa discloses clocked elements within the L2 grid, 0010), wherein the interconnect connects the clock driver past an exterior region of the clock grid to a connection point residing at a non-exterior region of the clock grid (see also Applicants' specification, 0006, Fig. 3a, 3b).

8. Pursuant to claim 14, wherein the transmission structure is balanced (Haritsa, Fig. 4, L5-L3 illustrates a balanced wire tree configuration).

***Allowable Subject Matter***

9. Claims 2, 6, and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: In a method for reducing clock skew, the prior art does not teach positioning the interconnect that connects the clock drivers to the clock grid so that a clock signal driven within an interior region inside the periphery of a clock grid structure has less skew than a clock signal traveling along the periphery of the clock grid within the clock grid structure.

***Remarks***

11. Haritsa reads on Applicants' claims because an exterior region of a clock grid includes within its scope regions outside of a clock grid structure. However, Applicants' specification and drawings seem to indicate that Applicants intend to claim an exterior region of a clock grid wherein the *exterior region only references the periphery or boundary of a clock grid structure*, and a *non-exterior region of a clock grid wherein the non-exterior region references an interior region inside the periphery or boundary of a clock grid structure*. Accordingly, Examiner suggests narrowing the claim limitations to specifically recite this feature of the invention.

**Conclusion**

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please reference the PTO-892 for a complete listing.

13. Any inquiry concerning this communication or earlier communications should be directed to Examiner A.M. Thompson whose telephone number is (571) 272-1909. The Examiner can usually be reached Monday thru Friday from 8:00 a.m. to 4:30 p.m.. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Matthew S. Smith, can be reached on (571) 272-1907.

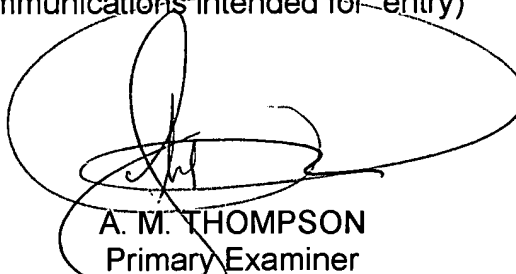
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1562 or the Customer Service Center whose telephone number is (571) 272-1750.

14. Responses to this action should be mailed to the appropriate mail stop:

Mail Stop \_\_\_\_\_  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

or faxed to:

(703) 872-9306, (for all **OFFICIAL** communications intended for entry)



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